

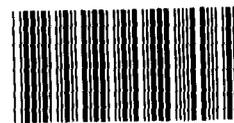
GAO

Report to the Commander, U.S. Air  
Force, Ogden Air Logistics Center

April 1990

# SPARE PARTS PROCUREMENT

## Contractor Qualification Requirements



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B-220528

April 27, 1990

Major General James W. Hopp  
Commander, U.S. Air Force  
Ogden Air Logistics Center  
Hill Air Force Base, Utah 84506

Dear General Hopp:

Senator Richard Shelby requested that we investigate the use of precontract award qualification requirements at the Ogden Air Logistics Center (ALC) to determine whether the Ogden ALC complies with certain federal laws and regulations intended to foster competition. Senator Shelby's request was based on allegations by a constituent, a small contractor in Alabama, that engineers in the acquisition divisions at the Ogden ALC were restricting competition by subjecting contractors to unnecessary qualification requirements.

Specifically, this report addresses precontract award qualification requirements used in the acquisition of aircraft and missile spare parts. Applicable federal laws and regulations describe precontract award qualification requirements as product examinations, tests or other quality assurance demonstrations that must be completed before a contract is awarded. The government uses these requirements to make certain that all potential sources can meet the strict manufacturing tolerances or other operating characteristics needed for critical spare parts that will be installed in airplanes and missiles. While these requirements do restrict the list of bidders to those whose products have passed the tests, they do not preclude competition because all sources have the opportunity to submit their products for testing to become eligible bidders. Our objective, scope, and methodology are described in appendix II.

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**Results in Brief**

Responsible acquisition and competition advocacy personnel at the Ogden ALC are often not complying with federal acquisition laws and regulations, nor are they regularly performing important duties that affect whether contractors will engage in unrestricted competition or will have to meet precontract award qualification requirements when bidding for contracts. There were three areas of non-compliance in Ogden ALC's use of precontract award qualification requirements: (1) acquisition divisions' engineers have not included the required item-

specific information in the written justifications for the use of qualification requirements, (2) acquisition division personnel have not provided the Competition Advocacy Office (CAO) with the required information needed to make informed acquisition method decisions, and (3) CAO personnel have not adequately documented the basis for their decisions to change the acquisition method assignments, as required. In addition, the record is not always clear whether CAO and Small Business Administration (SBA) personnel resolved disagreements with the acquisition divisions' engineers over acquisition method decisions.

## Background

The Ogden ALC is responsible for managing a number of weapon systems and components, including those used in the F-16 and F-4 aircraft. Engineers in five divisions under the Directorate of Materiel Management determine whether precontract award qualification requirements apply to the spare parts needed to support these weapon systems and components.

The acquisition division personnel prepare the required documentation, which includes any information that may have a bearing on the acquisition method decision. The CAO conducts a technical review of documentation received from the acquisition divisions and all other data in the Ogden ALC technical data file. Based on this technical review, the CAO personnel determine and assign the appropriate method of acquisition. The acquisition divisions' engineers then assess the documentation and technical data, and make their own judgments about whether qualification requirements apply to specific spare parts. Should the engineers' findings differ from those of the CAO personnel concerning the applicability of qualification requirements, the engineers' decision may prevail. The CAO reviews the engineers' decisions and if there are disagreements, according to an informal policy within CAO, the disagreements are to be elevated as necessary to higher supervisory, branch, division, or directorate levels.

The engineers' decisions concerning acquisition methods and qualification requirements are also sent to the local SBA representatives for their review. SBA is included in the review process because of its interest in promoting contracts with small business operators through full and open competition. Although the SBA representatives are not officially part of the acquisition method assignment process, they continually interact with acquisition divisions' engineers and CAO personnel concerning the acquisition method assignments. Under Public Law 100-590, if

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the ALC rejects SBA's recommendations on an acquisition method assignment, the SBA representatives can file an appeal with the head of the contracting activity and ultimately with the head of the agency. Even though they have these appeal avenues, SBA officials stated that they rarely use the appeal process, but do threaten its use to leverage informal agreements. Similar to CAO, SBA's practice is to resolve disagreements with the engineers informally, if possible.

A final method of resolution, unique to the Ogden ALC, is the Acquisition Method Code (AMC) Review Board, which was established to resolve disagreements over acquisition method assignments or the imposition of qualification requirements. CAO, SBA, or acquisition division personnel can bring disagreements before the Board.

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## Principal Findings

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### Engineers Are Not Preparing Adequate Written Justifications for Qualification Requirements

Acquisition divisions' engineers at Ogden ALC have not included required item-specific information in their written justifications of qualification requirements. Instead, they prepared standard justifications that include general information applicable to many items.

The Competition in Contracting Act of 1984 (P.L. 98-369) states that a contract may not be awarded using other than full and open competition procedures unless it is justified in writing. According to an Air Force Logistics Command regulation, written justifications must specify the necessity for the requirements and why the qualification must be demonstrated before contract award. Further, according to a local operating instruction, the justifications must link the assignment of qualification requirements to the spare part being acquired and must specifically and clearly define the reasons used to justify the assignment.

We reviewed 24 aircraft and missile spare parts that had been changed from an acquisition method using unrestricted competition to one using precontract award qualification requirements between March 1985 and April 1989. (See app. I.) Our analysis showed that for 21 of the 24 items, the written justifications did not contain the required item-specific information, did not link the qualification requirements to the items being acquired, and did not specifically and clearly define the reasons why qualification was necessary for those items. In fact, the language in

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these 21 written justifications prepared by the engineers in the acquisition divisions was stated in general terms that could apply to many items.

The following is an example of what the engineer originally included in the written justification compared to what was available, but was not included.

Information originally included in the written justification:

Item: Spacer Adapter

Application: C-5 A aircraft, nose landing gear

Justification for establishing a qualification requirement:

“1. Special skills associated with machining and processing of this item can result in product structural or durability degradations if not properly applied.”

“2. Execution of the qualification requirements specified herein is necessary to verify the structural and/or functional integrity and/or fit and form of the item being procured.”

“3. Failure to procure these items from a fully qualified source can result in structural or functional deficiencies that will compromise the mission capability of the respective aircraft.”

Information that was available, but not included in the written justification:

- This spacer adapter is a large diameter, thin-walled tube that interfaces between the axle and the wheel assembly for the C-5 A/B aircraft.
- This part is critical as it prevents the wheels from shifting and the tires from blowing when the aircraft lands.
- The dimensional tolerances of the item must be held to thousandths of an inch. Inability to maintain these tight tolerances introduces unstable movement and shifting of loads to the wheel assembly of the nose landing gear.
- Hard anodizing of the aluminum is a difficult process, especially given the tight dimensional tolerances. The process of hard anodizing changes

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the dimensions of the item. If not compensated for or correctly accomplished, these dimensional changes can result in the condemnation of the part.

- Thin-walled aluminum parts can be torn easily during machining operations.
- This item requires a forging. The forging sources are identified by the CAO, but the vendor must have prior arrangements with the forging sources to get the contract, and must be able to prove that he or she can get the forgings from an approved source.

Our review showed that the same standard written justification used for the spacer adapter was also used for six other items that were distinctly different. These items included a pivot pin on the brake torque link of the main landing gear of the C-141 aircraft and a ball socket on the nose landing gear of the C-5 A/B aircraft.

We were told that engineers in the acquisition divisions use standard justifications rather than item-specific justifications to save engineering resources, both human and financial. According to an acquisition division official, the engineers use to write justifications specific to individual items; however, CAO personnel continually questioned the justifications, causing engineers to fall behind in their work. Consequently, the acquisition divisions standardized most of the justifications.

However, not all acquisition divisions' officials agreed that standard justifications should be used. The officials in one acquisition division believe that the standard justifications are inadequate, and their use is discouraged. According to these officials, item-specific justifications may take more time, but the engineers need to take the time to carefully think through the justification of the qualification requirements for every item. Further, these officials stated that they have found it easier to get the more specific justifications through CAO's review process.

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### Item-Specific Information Not Always Provided to CAO Personnel

Acquisition division personnel are not routinely providing the CAO with available item-specific information that is needed to determine the appropriate acquisition method. Without complete information, CAO personnel cannot adequately fulfill their responsibilities. According to Ogden ALC regulation 57-6, acquisition division personnel are to provide all information that may affect the acquisition method assignment. This information should include specifics concerning (1) known and potential sources, (2) technical actions currently applicable to the item, (3) specific restrictive circumstances, facilities, or processes applicable to the

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item, (4) criticality and complexity of the item, and (5) definitions of government logistics, and technical and economic risks involved with the item.

Acquisition division personnel told us that the required information is included in the Ogden ALC technical data file reviewed by CAO. However, CAO personnel disagreed and stated that their experience has shown that information in the technical data file (e.g., drawings and specifications) is often outdated and incomplete. Further, the file does not include and CAO personnel are not provided information on such things as engineering judgments, problems with certain sources, or problems with parts in use. According to CAO personnel, in some instances, they requested updated, complete information, but certain acquisition division personnel refused to provide it.

Our analysis of 24 aircraft and missile spare parts showed that important item-specific information was often not provided by acquisition division personnel to CAO. Based on information originally provided by the acquisition divisions, the CAO personnel had not agreed with the engineers' decisions to use qualification requirements for 12 of the 24 items. Two of these disagreements were resolved by the AMC Review Board, which changed the acquisition method back to unrestricted competition. For the remaining 10 items, we obtained additional item-specific information from the engineers and provided it to the CAO personnel. They said this information would have supported the engineers' decisions that qualification requirements were justified for six of the items. For the other four items, they said the information would not have resulted in their agreement with the engineers' decisions to use qualification requirements.

In the example of the spacer adapter, the item-specific information provided by the engineers shows the type of information the acquisition division personnel could provide to CAO personnel. When the CAO personnel originally reviewed the technical package for the spacer adapter, based on the limited information provided to them by the acquisition division at the time, they determined that the acquisition method should be full and open competition without precontract award qualification requirements. However, CAO personnel believe that had they been provided the information on the item's special manufacturing requirements (e.g., the hard anodizing and tight dimensional tolerances), they probably would have agreed that qualification requirements were justified. Further, CAO personnel said the item-specific information provided is the

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kind of information they need, but do not receive early in the process to help them make informed acquisition method decisions.

Similarly, when we provided the SBA personnel the additional item-specific information, they changed their opinion on several of the 15 cases that they initially believed could have been acquired without precontract award qualification requirements. As explained above, two of these cases were resolved by the AMC Review Board. SBA personnel said that the additional information persuaded them to agree with the engineer's decision to require precontract award qualification for 5 of the remaining 13 items, but not for the other 8 items. According to SBA officials, their criteria for advocating competition on items are broader than those of CAO, because SBA is concerned with the additional factor of how precontract award qualification requirements affect small businesses.

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### CAO Is Not Adequately Documenting Changes in Acquisition Methods

Our review indicated that CAO personnel had not been complying with requirements that they document their technical review results. According to Ogden ALC regulation 57-6, CAO is to

“ . . . summarize the result of the technical screening performed by describing in sufficient detail the specific restrictive circumstances, facilities, or processes . . . ” that warrant qualification requirements.

For the 12 items we reviewed for which CAO personnel had assigned an acquisition method requiring precontract award qualification requirements, the personnel did not adequately document the circumstances requiring qualification. Instead, they included only the information contained in the generally stated written justifications provided to them by the engineers. Accordingly, the documentation disclosed little information on how or why CAO personnel decided on the acquisition method assignment.

CAO officials agreed that the acquisition method decisions are inadequately documented. They are now developing a system to document decisions made concerning the assignment of acquisition methods and the rationale for these decisions. According to the CAO Director, they plan to begin using the new system in July 1990.

## Record Not Always Clear Whether Disagreements Resolved

Although CAO and SBA personnel disagreed with many of the engineers' decisions to require qualification requirements, they did not adequately document the resolution of these disagreements. In addition, CAO personnel did not regularly use the AMC Review Board to resolve disagreements with engineers. Consequently, we were unable to determine which disagreements were resolved or how. Without adequate documentation, the Commander of the Ogden ALC is unable to assess whether disagreements were satisfactorily resolved. Similarly, SBA is unable to assess this performance element for its representatives at the Ogden ALC.

The CAO personnel and acquisition divisions' engineers disagreed on the use of qualification requirements for 12 of our sample items. For the two disagreements resolved by the AMC Review Board, we found that the basis for resolution was not documented in the case files. For the other 10 disagreements, documentation was generally insufficient to allow a clear understanding of the basis for resolution. In 5 of the 10 cases, no information about resolution was included, so it was unclear not only how, but also whether the disagreements had been resolved. CAO officials said that they are not required to resolve disagreements or to bring them before the AMC Review Board. If they resolve disagreements, the CAO personnel prefer to do so informally.

SBA representatives disagreed with the engineers' assignment of an acquisition method requiring qualification on 15 sample items. However, the SBA representatives said that since they also have no requirement to resolve disagreements, they did not press the engineers to resolve the disagreements concerning these items. As stated above, two of these disagreements were resolved by the AMC Review Board, but the basis for resolution was not adequately documented.

## Recommendations

To ensure that applicable laws and regulations are followed, and that precontract award qualification requirements are used properly, we recommend that you direct the

- acquisition divisions' engineers to properly prepare written justifications that document the necessity for the qualification requirements by stating the reasons why qualifications must be demonstrated before contract award, linking the assignment of qualification requirements to the spare part being acquired, and stating specific and clearly defined reasons to justify the assignment;

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- acquisition divisions to provide CAO personnel with the most up-to-date and complete item-specific technical information before the personnel make acquisition method assignments;
  - acquisition divisions to respond in a complete and timely manner to requests for information from CAO and SBA;
  - CAO to diligently seek, from the acquisition divisions' engineers, the information needed to make informed acquisition method decisions, and regularly use the AMC Review Board to resolve disagreements with engineers; and
  - CAO to adequately document changes in acquisition method assignments and resolutions of disagreements over those assignments.

We also recommend that you request the assistance of the SBA Regional Administrator to ensure that SBA representatives at the Ogden ALC resolve disagreements with ALC personnel over acquisition methods.

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Responsible officials at the Ogden ALC provided comments on the facts presented in this report and these comments were incorporated, as appropriate. Copies of this report are being sent to Senator Shelby; the Secretary of Defense; and the Administrator, SBA. Copies will also be made available to others on request.

Please contact me at (303) 844-0017 if you or your staff have any questions concerning this report. Major contributors to this report are listed in appendix III.

Sincerely yours,



David A. Hanna  
Regional Manager

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## Abbreviations

ALC	Air Logistics Center
AMC	Acquisition Method Code
CAO	Competition Advocacy Office
SBA	Small Business Administration



# Sample of Spare Parts Requiring Precontract Award Qualification Requirements

Item	Acquisition division <sup>a</sup>	Adequacy of justification <sup>b</sup>	Additional information available <sup>c</sup>
1. Gyro end cover	MMG	Inadequate	Yes
2. Hinge (wing)	MMS	Inadequate	Yes
3. Hinge pin (wing)	MMS	Inadequate	Yes
4. Parts kit (wing)	MMS	Inadequate	Yes
5. Duct (env.control)	MMA	Inadequate	Yes
6. Fairing assembly	MMA	Inadequate	Yes
7. Static discharger	MMA	Adequate	N/A
8. Support assembly	MMA	Inadequate	Yes
9. Pivot pin (brake)	MMI	Inadequate	Yes
10. Shoe assembly	MMI	Adequate	N/A
11. Piston carrier	MMI	Inadequate	Yes
12. Socket half	MMI	Inadequate	Yes
13. Metering tube	MMI	Inadequate	Yes
14. Spacer adapter	MMI	Inadequate	Yes
15. Cover assembly	MMI	Inadequate	Yes
16. Link assembly	MMI	Inadequate	Yes
17. Trigger arm assy.	MMI	Inadequate	Yes
18. Yoke collar	MMI	Inadequate	Yes
19. Stop - snubber	MMI	Inadequate	Yes
20. Rod assembly	MMI	Inadequate	Yes
21. Swivel assembly	MMA	Inadequate	Yes
22. Bolt	MMA	Inadequate	Yes
23. Wheel bolt	MMI	Inadequate	Yes
24. Gyro mount	MMG	Adequate	N/A

<sup>a</sup>Divisions under the Directorate of Materiel Management: MMA—F-16 System Program Management Division.

MMG—ICBM System Program Management Division.

MMI—Item Management Division.

MMS—F-4 Aircraft System Program Management Division.

<sup>b</sup>Adequate written justifications meet requirements of regulations by containing pertinent item-specific information and linking the assignment of the qualification requirements to the item. Inadequate written justifications contain only standardized language and little, if any item-specific information. They do not link the assignment of the qualification requirements to the item.

<sup>c</sup>Yes—Additional information concerning the use of qualification requirements was available from the engineers. N/A—Justification in source qualification statement was item specific; no additional information needed.

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# Objective, Scope, and Methodology

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Our objective was to determine if the Ogden ALC use of precontract award qualification requirements complied with applicable federal laws and regulations.

We reviewed the Competition in Contracting Act of 1984, the Defense Procurement Reform Act of 1984, section 9.2 of the Federal Acquisition Regulation, and applicable Air Force regulations pertinent to precontract award qualification requirements and interviewed (1) Air Force officials responsible for determining when qualification requirements apply to the acquisition of a spare part and (2) SBA representatives responsible for reviewing these acquisition method decisions.

We analyzed 24 items that had been changed from an acquisition method using unrestricted competition to one using precontract award qualification requirements between March 1985 and April 1989. To determine what information was available and used throughout the acquisition method decision process, we obtained and reviewed the supporting documentation and interviewed CAO, SBA, and acquisition divisions' engineers involved in this process. We also interviewed responsible acquisition divisions' engineers and obtained additional item-specific information not included in the written justifications. We then asked CAO and SBA personnel if the item-specific information had been provided previously and if, in their opinions, this information is necessary to complete the process. Our results are reported only as they pertain to the 24 sample items, not the overall population of approximately 150 items.

Our review was performed at the Ogden ALC in accordance with generally accepted government auditing standards from June 1989 to December 1989.

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# Major Contributors to This Report

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